

ADDITIONAL NOTES ON THE AVIFAUNA OF IRAQ

BY

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ASSISTED BY

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AND

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(with 3 plates)

INTRODUCTION

The following paper should be read in conjunction with the Birds of Mesopotamia¹ to which it forms an addenda. The contents are founded entirely on records supplied by Sir Percy Cox and Major R. E. Cheesman and the collector employed by Sir Percy Cox, La Personne, and on specimens which were brought back by them and includes information and specimens supplied to them from various sources (acknowledged below). The period covered is from the return of Sir Percy Cox and Major Cheesman to Iraq in October, 1920, down to their departure in 1923.

Much of the information naturally comes from the Baghdad area but both Sir Percy Cox and Major Cheesman undertook various trips in the plains while the latter made a special trip to the Pusht-i-Kuh, east of Ali Garbi (Luristan) and though outside Iraq proper such records, as are noteworthy, are for convenience added to this paper and are referred to as 'the hills east of Ali Garbi'. La Personne was employed to undertake special trips to Dohuk and Mosul in the north, the Euphrates marshes, Fao and the islands at the head of the Gulf. In all a very considerable collection was got together, the avifauna of additional areas investigated, many gaps in and knowledge of Iraq birds filled and many of our former observations confirmed.

In this paper I have only listed those species concerning which any additional information has come to hand whether it be in status, distribution, nidification or habits, etc., and in a few cases where former statements need modification. 25 species are now added to the avifauna; of these 14 come from the Mosul-Dohuk area, 5 from Baghdad area, 3 from Fao area, 2 from Rutbah Wells district and one is now extinct, in addition one more is extra limital. Five further races have been described as peculiar to Iraq; of species known to occur in Iraq a further 16 sub-species are listed (plus one extra limital) while the representative race of 7 others which were in doubt before have been now satisfactorily determined. One remains yet to be solved—The Finch Lark. Three races have been removed, viz., *Prinia gracilis lepida*, *Podiceps ruficollis capensis* and *Ammoperdix griseogularis ter-meuleni*. Original references are only given to species or sub-species which are additional to those given in the previous paper. (C.B.T.) *B.N.H.S.*, 1921, pp. 197-237, 1922, pp. 269-315; 325-349; 371-390.

Description of additional localities—

1. *Dohuk*. A small town in the Kurdistan foothills, near the Iraq north frontier, lying in a valley with a stream and fruit gardens of pomegranates, and figs; it is shut in on the south by Dohuk Dag (2,000 ft.) and by the Jebel Abiad and Tang-i-Dorg on the north while beyond these rise range after range of the Kurdistan highlands. The lower slopes of Dohuk Dag are covered with vineyards and further up is stunted oak.

2. *Dara, Boonah and Gabr-an Nakhuda* are three islands in the Khor Musa at the head of the Gulf N. E. of Fao: Dara Is. lies 3½ miles S. W. of Boonah and is half a mile across and is cut across itself by a creek; a ridge runs from end to end and is covered with a 'salt bush' scrub. Boonah Is. is a mile long and half a mile wide. Gabr-an Nakhuda lies 13 miles N. N. W. of Dara and is 100 yards X 75, it is covered with low scrub. All these islands are more or less connected at low water. The Khor Musa is a broad estuary holding water at high tide, much exposed at low; it runs many miles inland dividing into other creeks.

¹ *Journ., Bom. Nat. Hist. Soc.* vol. xxviii, Nos. 1, 2 and 3.

3. *Bubyan and Warba Islands* are practically part of the mainland; they lie at the head of the Gulf 2½. of Fao. Bubyan is 26 miles long N. to S. and 12 miles broad, barren and partly covered at high tide; a large creek the Khor Milah runs into the island. It is separated from the Koweit mainland and Warba Is. by a creek—the Khor Sabiyah (½ mile wide) which is partially dry at low water, and from the Fao mainland by the Khor Abdulla 2½–13 miles wide.

4. Warba Is. lies to the north of Bubyan and is separated from the Fao mainland by the head of the Khor Abdulla (here ½ a mile wide) and is 7 miles long E. N. E.—W.S.W. and 2½ miles broad. These two islands were referred to in the previous paper as the 'Abdulla Banks'.

5. The area referred to in this paper as '*the hills east of Ali Gharbi*' includes the arid foot hills of the Jebel Hamrin; but beyond the limits of Iraq it also includes a plain (1,000 ft.) rising gradually to the Pusht-i-Kuh Hills (up to 3,500 ft.) and a valley running to the east (2,000 ft.). Here there are a few running streams and the hill tops are covered with oak forest.

The following is a list of those who also assisted in the forming of this collection in various ways—procuring specimens, helping with transport, bringing information, etc. All care possible has been taken with the spelling of names but as many have been extracted from indistinct labels it is hoped that errors and omissions will be excused. In addition Mr. E. C. Stuart-Baker has kindly sent a few notes on such eggs as called for remarks.

P. S.—Just as this manuscript was going to Press there appeared in the *Ibis* (Oct. 1924, pp. 601–625) a very valuable paper by Col. R. Meinertzhagen on a 'Collection of Birds made in Iraq'. The author entered Iraq from Palestine to Ramadi and during 3 months' stay (Nov.–end of January) visited several places which were little or unknown ornithologically, notably Mosul and the district, up to the Turko Iraq frontier and S. Kurdistan. For the sake of completeness I have included in this paper his more important observations which are additional to information already to hand. Such are initialed (M) or are referred to by name.

H. M. King Faisal	Khan Saheb Soofi
H. H. The Amir Zaid	Mr. G. C. Kitching
Capt. Aldworth, D.S.O.	Mr. Kinch
Sayid Jafar Ataifa	Capt. C. Littledale, M.C.
Haji Adha	Major J. More, D.S.O.
Miss G. L. Bell, C.B.E.	Dr. Norman
Capt. Buist, R.A.M.C.	Capt. Pedder
Mr. Butcher	Mr. Nelson Porter
Mr. Barnes	Major Pulley
Capt. I. N. Clayton	Mr. Penny
Major G. S. Cameron, M.C.	Mr. L. T. Pollard
Dr. Corner	Mr. J. Parlbry, O.B.E.
Mr. C. E. Capito	Mr. H. St. J. B. Philby, C.I.E.
Mr. Cowley	Capt. R. Palmer, R.N.
Mr. A. Dutt	Lt-Col. R. Prescott, C.I.E.
Major H. R. R. Dickson, C.I.E.	Shaikh Rashid al Khalof
Mr. Empson	Flight Lieut. McLaren Reid
Major C. I. Edmonds	Flight Lieut. Robb, R.A.F.
Major A. D. Fraser, D.S.O., R.A.M.C.	Mr. Rooke
Shaikh Fahad Beg	Capt. H. M. Stanford, M.C., R.F.A.
Mr. RleFernandez	Mr. Swami
Mr. Glenister	Sedhid
Lieut. Grand, R.E.	Shaikh Salen al Khayun
Lieut.-Genl. Sir A. Haldane, G.C.M.G.,	Dr. Sinderson
K.C.B., D.S.O.	Mr. A. G. Tomlinson
Haji Naji	Tota Ram
Hassan Segar	Mr. Roger Thomas
Capt. Hitchcock, Railways, M.E.F.	Mr. Thompson
Capt. S. E. Hedgecock	Col. J. R. Tainesh, C.B.E.
Col. A. E. Hamnerton, C.M.G., D.S.O.,	Col. Sir A. T. Wilson, K.C.I.E., C.M.G.,
R.A.M.C.	D.S.O.
Sayid Husain Afnan	Major R. J. Wilkinson
H. H. The Said Sultan of Najd	Mr. Webster
Major Jeffries	Mr. L. W. White
Lieut.-Col. P. C. Joyce, C.B.E., D.S.O.	Major Yetts, M.C. and others

Raven. *Corvus corax laurencei*, Hume.

Occurs north to Mosul and S. Kurdistan at least in winter, one seen at Rutbah wells end of October (M).

Hooded Crow. *Corvus cornix*.

Corvus cornix sardonicus (Orn. Monats., 1903, p. 92, Sardinia). This is the only Hooded Crow at Mosul and then only in winter. La Personne noted it at Mengashi, Dohuk area, by November 18. The Hooded Crow which visits Iraq in winter has always been called *sharpii* but I am doubtful if this race occurs there at all. In the 'Birds of Mesopotamia' I listed two specimens as *sharpii* and I have not been able to re-examine these but five more from Dohuk, Baghdad Fao (examined by Cheesman and myself and compared with the type of *sharpii*) are too small and too dark. They are the same colour as Egyptian and Sardinian birds and measure ♂ ♀ 283-304. The type of *sharpii* comes from Mardian in the Punjab; it is a much larger and paler bird.

Corvus cornix capellanus, Sclater. The early breeding season is fully confirmed; a nest with 3 eggs at Qarradah, Baghdad, on February 22, another at Fao on the 21st with four eggs. Late in the breeding season the mantle becomes nearly white and the wings rusty brown. Noted at Ramadi in November, Khanikin and Kerkuk in December (M).

Rook. *Corvus frugilegus* L. 'Zarg'.

Flocks were seen crossing the Jebel Abiad, Dohuk area, going south on December 13. Meinertzhagen saw flock after flock arriving at Mosul from the N.E. on November 25, at an elevation of 800 feet; he estimated a huge roost on the open plain at Khanikin to number 193,000 birds.

Jackdaw. *Corvus monedula soemmeringii*. Fisch (=collaris auct.)

Breeds at Mosul. Meinertzhagen found them not very uncommon at various places north of Baghdad in winter, there usually being some with each flock of Rooks he also saw pure flocks emigrating at Hadr on November 22 and at Khanikin at the end of December (M).

Magpie. *Pica pica bactriana* Bp.

Recorded as resident and breeds at Mosul; very common at Dohuk old nests being seen everywhere. Resident at Sadiyah 60 miles north of Baghdad where there is a belt of palms; also found at Kirkuk. Noted at Nasiriyeh (M).

Chough. *Pyrrhocorax pyrrhocorax* (L) Syst. Nat. Ed. x, 1758, p. 118—England.

Common in the hills east of Ali Gharbi near Pir Mahommed and other places at 2,500 and 3,000 feet in October; a pair were seen in the foot hills as low as 1,000 feet. Wings 3. 305-311. 293. Common at Dohuk and Zakho—(M)

Jay. *Garrulus glandarius*

Garrulus glandarius atricapillus, Geoffr. (Etud. Zool. fasc. 1, 1832—Libanon) La Personne met with this Jay on the Tang-i-Dorg (Dohuk area) in October; a flock was seen working round the mountain in search of food, and it was noticed occasionally in gardens at Dohuk. Cheesman met with jays at Chasmet Sherin 2,500 ft. and several more at Pir Mahommed, 4,000 ft. in oak woods on October 11. The last two localities are in the hills east of Ali Gharbi. W. 177-182.

Starling. *Sturnus vulgaris*.

1. *Sturnus vulgaris vulgaris* (=sophiae auct). This is the common winter starling in Iraq. Whether it is sufficiently distinct to warrant recognition is a matter of opinion. A fair number of specimens are recognized in having a purer green mantle and scapulars and the flanks more tinged with purple violet than in typical *vulgaris*, the spotting on the upper parts too, is often paler, but none of these characters is by any means constant and quite a number are not to be picked out from West European birds. Specimens were obtained from Dohuk area in the extreme north to Zobeir oasis in the extreme south; examples were obtained also migrating over the highlands of Dohuk on November 1.

Sturnus vulgaris nobilior, Hume. Out of six birds obtained at Mosul, three of which were shot in the town itself and probably belong to the

Starling—(contd.)

resident form, five are not separable from *nobilior*. All have purple heads, throats and ear coverts as well as under tail coverts and have black, white-edged under wing coverts; the rump and upper tail coverts vary, some are more purple than others; the mantle is grass-green. They are indistinguishable from Kandahar birds. If, as seems likely, this is the breeding race at Mosul the breeding area of *nobilior* will need some extension. I am still of opinion that *oppenheimi* is not a good race and in fact, is according to Drs. Hartert and Stresemann who have seen the type, nothing but *purpurascens* (*Ibid*, 1924, p. 604) as already hinted in our previous paper.

3. *Sturnus vulgaris purpurascens*, Gould (Proc. Zool. Soc, p. 219, 1868, Erzerum).

The sixth starling shot in the country near Mosul on January 13 is a typical *purpurascens*. We had no certain record of this race in our area. Obtained at Basra in February (M).

It seems to me that the Asiatic Starlings still need a lot of working at but nothing can be done without a larger amount of material in the way of breeding birds over a wide area.

Rosy Pastor. Pastor roseus (L).

Additional record. Two flocks, 20 in each were seen by Sir Percy Cox flying up the Tigris 10 miles above Baghdad on May 14.

Golden Oriole. Oriolus oriolus oriolus (L).

Arrived in the first days of May confirmed both at Fao and Baghdad, males coming first. At the Chekkan River (Jebel Hamrin) one was seen to arrive from a great height and go to roost in the only tree October 8.

Siskin. Carduelis spinus (L).

Noted at Mosul January 8. Flock arrived at Baghdad January 15, and were found to be feeding on seeds of *Zinia*.

Goldfinch. Carduelis carduelis niedlecki Reich.

Noted as common at Mosul in winter and flocks were seen on Tang-i-Dorg (Dohuk) in November. Winter visitor annually at Baghdad. All specimens belong to this race. An old nest found at Feshkhabur on the Turko-Iraq frontier (M).

Linnet. Acanthis cannabina fringillirostris Bp. and Schleg.

Common at Dohuk in small flocks in open fields and along streams. Arrived November 3. Flock noted at Kirkuk in winter.

Red-fronted Serin. Serinus pusillus (Pall.).

Common in the hills at Dohuk at 2,000 feet coming frequently to springs.

Syrian Serin. Serinus syriacus, Bp. Consp. Av., i, p. 523, 1850, 'ex As. occ. Bischerre'.

Appeared at Dohuk at the latter half of December in fairly large numbers feeding on seeds of reeds and became common. Common at Mosul in January.

Rose Finch. Rhodospiza obsoleta (Licht.).

A flock noted on March 11, in an isolated garden at Baghdad feeding on the buds of the pomegranate. Another flock at Hillah on February 1. Scarce winter visitors.

Chaffinch. Fringilla coelebs coelebs (L).

Arrived in the gardens at Dohuk November 2, and became common. Common too at Mosul.

I have examined a very large series of Asiatic and West European Chaffinches. In the Asiatic birds (Asia Minor, Iraq, Persia) the reduction in the brown mantle in the males is by no means constant nor have they stouter bills. Some of the females are 'colder' less brown on the back but they vary very much. Therefore I must unite these Iraq birds with the typical race; I have not seen West-Caucasian birds (*solomkoi* Menzb. and Suschkin) but one would expect the Iraq birds to be the same and I much doubt whether *solomkoi* is a good race.

Chaffinch—(contd.)

Fringilla montifringilla L. First seen at Dohuk on December 19, and it became common; flocks were noted migrating south down the valley. Common at Mosul in January in Tamarisks and wheat fields. Obtained at Baghdad on January 21. Three seen at Kirkuk in winter.

Greenfinch. *Chloris chloris*.

Chloris chloris turkestanica, Zar. (Orn. Monat., 1907, p. 61. N. W. Turkestan).

Greenfinches were common in the gardens and in trees on the hills side at Dohuk on La Personne's arrival October 17, and remained so. Noted as common at Mosul in January. A good series were obtained, these are of the same size in wing and bill as the typical race but are brighter and paler, and in this respect are much as in *chlorotica* but of course are much larger. ♂ W. 86-90.

Rock Sparrow. *Petronia petronia exigua* (Hellm.).

Small flocks seen on the cliffs on the Tang-i-Dorg often associated with Alpine Accentors. Only two specimens obtained; these are not *intermedia*, they are only very slightly paler than French birds. ♂ wing 102.5, ♀ 94.5, they correspond well with *exigua*.

Yellow-throated Sparrow. *Gymnorhis xanthocollis transfuga*, Hart.

Breeding at Baghdad May 16, flying young there on June 21, and fresh eggs (4) on June 30, so that this species must be double brooded. No record beyond Baghdad.

House Sparrow. *Passer domesticus biblicus* Hart.

Cheesman noted nests built on branches of trees in a wood near Baghdad. Nests with six eggs on June 12, and another with four eggs on June 22 are late. Common at Mosul and specimens thence are rather darker than those from lower Iraq but this may be due to dirt; they are paler and have longer bills than the typical race.

Scrub Sparrow. *Passer moabiticus moabiticus* Trist.

Two colonies visited by Cox and Cheesman had nests with fresh eggs (4 and 5) on May 16; a nest on June 12 held 4 incubated and 2 fresh eggs. A flock was met with at Hindeyeh Barrage on September 17 feeding on bull-rush seed.

Spanish Sparrow. *Passer hispaniolensis transcaspicus*, Tchusi.

Cheesman noted flocks migrating over Baghdad on May 16. At Qalet Dasar (Pusht-i-kuh) flocks were migrating down a ravine on October 8. A colony of old nests of the species found at Barzia (Pusht-i-Kuk.)

Corn Bunting. *Emberiza calandra calandra*, L.

Most have left the vicinity of Baghdad by March 11, but quite a number remain to breed in cultivation and rank grass. A nest of 3 eggs and 4 young was found on April 18 and another with 5 eggs at Shergat in April. Exceedingly common at Mosul and Dohuk, at least in winter. Some were met with the Pusht-i-kuh near Pir Mohammedi 2-3,000 feet. A nest with six eggs from Jift March 19 (Aldworth).

Yellow Bunting. *Emberiza citrinella*.

Emberiza citrinella erythrogenys, Brehm (Vogelfang, p. 414, 1855—Sarepta). Two were obtained at Dohuk, October 13 and December 15; 'possibly numerous'. Paler above and on the edges of the wings than West European examples.

Meadow Bunting. *Emberiza cia*.

Emberiza cia par, Hartert (Vog. Pal. Fauna, p. 184—Transcaspia). One shot from a flock at Dohuk on December 15; 'possibly numerous'.

Black-headed Bunting. *Emberiza melanocephala*, Scop.

Odd males at Baghdad on April 24 and May 15.

Ortolan Bunting *Emberiza hortulana* L.

Very large flock at Baghdad on passage on April 25 also noted on passage April 17 Gabr-un-Nakoda Is (Fao area) and April 18, 23, on Bubyian Is (Fao area).

Reed Bunting. *Emberiza schoeniclus pallidior*, Hart.

Obtained at Kirkuk and Zakho in December (M).

Black-crowned Finch Lark. *Pyrrhuloxia frontalis*.

La Personne was sent twice to the desert west of Basra to get these Finch-Larks, but unfortunately, though common, he only succeeded on the second trip in June. Three males, two females (lab. ♂) and a juvenile were obtained, but naturally they are in very bad condition—very worn and moulting. I have already pointed out how the Iraq males differ from the African and Arabian races and can now add that the Iraq female and young are greyer above than *frontalis frontalis* and paler than *f. melanauchen*. Both sexes are no longer in wing and have rather differently shaped bills to *syncipialis*. In length of wing and in bill I cannot distinguish them from the Sind *affinis* and as regards colour I can come to no conclusion as the specimens are so poor.

3 ♂♂ W. 84.5-87; Bill from base 13 greatest height 7

2 ♀♀ W. 78.82 " " 13.5 " 7

Series *syncipialis* W. 79-83 " " 11.5-12.5 " 6

The Iraq specimens came from the Oasis of Huwaile about 16 miles from Koweit. I must leave them as indeterminable.

Calandra Lark. *Melanocorypha calandra*.

1. *Melanocorypha calandra calandra* (L.).

2. *Melanocorypha calandra psammochroa*, Hart.

Both races occur in the Iraq plain in winter; a Calandra Lark breeds at Mosul but we have no breeding specimens to determine which race.

3. *Melanocorypha calandra hebraica* Meinertzh. (Bull. B.O.C., xli, 1920, p. 21—Palestine).

Meinertzhagen records that he obtained two at Hadr on November 23, which he considers to be of this case.

Skylark. *Alauda arvensis cantarella* Bp.

Again in this additional collection there are some skylarks which appeared darker on the mantle, less grey, than *intermedia* (= *dulcivox*) and I can only suppose that they are *cantarella*, the South European bird. I have been unable to see any certain *cantarella*, obtained at the same time of the year however.

Wood Lark. *Lullula arborea pallida* Zar. Small flocks at Dohuk on November 14.**Lesser Short-toed Lark.** *Calandrella rufescens* (= *minor* auct).

1. *Calandrella rufescens minor* (Cab.). As was suspected (vol. xviii, p. 225) a short-toed lark breeds in Iraq. Cheesman found a few pairs breeding near Baghdad and on June 5 discovered a nest in a cup-shaped hollow in the ground under a branch of dwarf *Acacia stephania*. The nest was made of fine grasses interwoven with wool and native thread; it contained 3 incubated eggs; another nest with 4 eggs in a similar situation on June 14. The eggs are greeny-white with sandy brown spots forming a ring at the larger end and measure 21 × 16 mm. The male soars high when singing; when on the ground the birds often fly up to take insects on the wing.

The breeding bird obtained is of course very worn but it certainly seems to belong to this race. This bird was formerly called *C. minor minor* but if the Tenerife Short-toed Lark is considered to be of the same species then *rufescens* must be the specific name.

2. *Calandrella rufescens persica* Sharpe (Cat. B. Brit. Mus. xlii, p. 590, 1890—Persia.) I overlooked the fact, until too late for publication, that there is in the Tring Museum a juvenile of this race from Fao obtained by Cumming. On the Jebel Sanam at Zobeir, on June 28, La Personne obtained a juvenile bird in rather worn dress which must belong to this race. It is certainly one of the *rufescens* group, sandy red above and with a large bill; a female. W 85. It is exactly the same size as the above Tring bird.

Lesser Short-toed Lark—(contd.)

In winter Cheesman obtained both *minor* and *heinei* in this locality, while in the British Museum there are two moulting birds from Fao, August 26, which are also *minor*.

Desert Lark. *Ammomanes deserti*.

1. *Ammomanes deserti cheesmani*. Meinert. (Bull., B.O.C., xliii, p. 187, 1923—Shat-al-Adaim). Under the above name Col. Meinertzhagen has named birds from Shat-al-Adaim, Kasr-i-Sherin and Naft Kaneh, having compared with *fraterculus*, a smaller bill (14 mm.) a darker back and head and more rufous underparts. Having only seen the two birds from Shat-al-Adaim I did not feel justified in separating a race from that area especially as that area is almost surrounded by the areas inhabited by *fraterculus*—a very curious and local distribution.

2. *Ammomanes deserti coxi*, Meinert. (Bull., B.O.C., xlii, 1923, p. 15—Syrian Desert, E. of Damascus). One obtained in October 30, in 40° 10' E. 33° 10' N. (west of Rutbah wells) belongs to this large form (M).

3. *Ammomanes deserti fraterculus*, Trist. The recent collection contains specimens from Feluja, Samarra and an area of the foothills east of Ali Garbi; up to a height of 2,300 feet in Pusht-i-Kuh. They are indistinguishable from *fraterculus*. W. 94–105. Bill from base 14–8 mm. I am very doubtful whether the alleged smallness in bill in *cheesmani* is a good character; I have seen Palestine birds (males) with bills varying from 14.5 to 17.5 mm. Occurs 20 miles W. of Ramadi (M).

Bifasciated Lark. *Alaemon alaudipes cinerea*, Zar. (= *pallida* auct)

The *Alaemon* is by no means confined to the desert west of Euphrates. Cheesman met with it on the plains to the east of Ali Garbi in October, at Qarradah and at Aqqar Quf near Baghdad and on the east side of the Iskandariyeh canal in the breeding season. On June 5, a nest was found in the top of a dwarf acacia a foot high at Aqqar Quf; it was composed of thorny twigs and lined with cottony heads of desert flowers and contained 3 fresh eggs. 'The birds were very tame and came up to the nest within 10 feet of me but ran away when I approached nearer.' (R.E.C.) Another nest found the same day had 3 eggs nearly hatching. On June 11 another nest was found in the same locality containing two young, in this case the nest being built in a scrape under the shelter of a bush and droppings of the young lined the nest. Another nest on June 23 contained 2 young and 1 egg.

A pair were evidently breeding on Boonah Island (Fao District) on May 20. Occurs west to Rutbah Wells and beyond the Amman-Ramadi route (M).

The ground colour of these eggs is practically white, and there are numerous tiny specks or freckles of purple-black over the whole surface, more numerous and rather larger in a ring round the bigger end. The texture is close and fine, and there is a faint gloss. The shape is, as usual, long and rather pointed. They measure 26.0 × 17.2; 24.4 × 17.8; and 24.4 × 17.9 mm.

Shore Lark. *Eremophila alpestris bilopha*, Temm.

Common 5 miles west of Ramadi end of October (M).

Tree Pipit. *Anthus trivialis trivialis* L.

Obtained at Dohuk as late as November 1st.

Meadow Pipit. *Anthus pratensis* L.

Cheesman obtained it in the foothills east of Ali Gharbi on October 15. One at Baghdad December 25 (M).

Red-throated Pipit. *Anthus cervinus* Pall.

A flock not noted at Baghdad on May 14.

Tawny Pipit. *Anthus campestris*.

Anthus campestris griseus Nicoll (Bull., B.O.C., xli, p. 25, 1920—Turkestan).

Two obtained in the foothills east of Ali Garbi on October 6 belong to the eastern race; it was not uncommon.

Grey Wagtail. *Motacilla cinerea*.

Motacilla cinerea caspica (Gm.) (= *melanope* auct) (Reise d Russl., 811, p. 104, 1774—Enzeli.) A male obtained at Baghdad on December 23. Tail 93 mm. (M).

Blue-headed Wagtail *Motacilla flava thunbergi*, Billb.

A flock at Baghdad as late as May 14 on passage. Mostly females.

White Wagtail. *Motacilla alba*

1. *Motacilla alba dukhunensis*, Sykes. This race is evidently a fairly common winter visitor. Cheesman obtained two in November at Baghdad. Two at Baghdad and one in S. Kurdistan in December (M).

2. *Motacilla alba persica* Blan. A female obtained at Basra December 27, 1913 (M).

3. *Motacilla alba personata*, Gould (B. of Asia, iv, p. 163, 1861—India). Two males obtained at Basra on February 4, 1914 (M).

Rock Nuthatch. *Sitta neumayer*.

1. *Sitta neumayer dresseri* (Zar. and But.) Common in the foothills east of Ali Gharbi (1,000–2,000 feet) in October. Cheesman found them very wild except when they were drinking at wells; their loud bubbling note always attracted attention. An old nest was found in a circular cavity in a cliff 20 feet from the ground. It was a large oval mud patch 1½ feet wide, one foot high, the cavity one foot broad, the walls 1½ inches thick; near the top was the circular bottle neck opening. 8 ♂♂ W. 89–94 once 98. B. exp. 23–25. 5. 6 ♀♀ 88–93 B exp. 22–25 mm.

2. *Sitta neumayer kurdistanica*, C.B. Ticehurst (Bull., B.O.C., xlv, p. 28—Dohuk, Kurdistan. Common in the cliffs at Dohuk and especially on the Tang-i-Dorg also noted on the building of the Khasafir monastery. It is said to have quite a sweet warbling note; compared with *dresseri* in same plumage these birds are a shade darker and have darker rust coloured flanks.

♂ W. 91–98; B. exp. 24–26. 5. ♀ W. 90; B. exp. 25 mm.

Two obtained and an old nest seen at Naft Khaneh in December, common at Kasr-i-Sherin (M).

Small Rock Nuthatch. *Sitta rupicola tschitscheria*, Zar.

La Personne states that this bird inhabits the same places as *S.n. kurdistanica* does at Dohuk where it is the less common of the two. He obtained one there on November 5.

♀ W. 77.5 Bill exp. 18.5.

Wall creeper. *Tichodroma muraria*. (L.). (Syst. Nat. Ed., xii, 1766, p. 184, S. Europe).

Not uncommon on the cliff faces at Dohuk from October 25 onwards. Seen on the ruins of Nineveh near Mosul, January 20.

Great Tit. *Parus major blanfordi*, Prazak.

Common in gardens and ravines at Dohuk and at the Khasafir monastery. Noted at Mosul where specimens were obtained in January. 4 ♂♂ W. 76–80. 2 ♀♀ 73–5. Two seen at Kirkuk in December.

Sombre Tit. *Parus lugubris*.

1. *Parus lugubris dubius*, Hellm. (Journ. f. Ornith. 1901, p. 173—Persia.) Cheesman met with a pair in scrub near a spring at Fittak (1,000 feet) in the foothills east of Ali Gharbi on October 2; several pairs in the higher hills (2–3,000 feet) a few days later. 2 ♂♂ W. 72.5–74 Extra-limital subspecies.

2. *Parus lugubris anatoliae*, Hart (Vog. Pal. F., p. 368—Ahoory Asia Minor).

Met with, chiefly in vineyards and hedges, in the neighbourhood of Dohuk, also at Khasafir monastery; it avoids gardens and denser scrub. A pair were obtained ♂ W. 71; ♀ 69. These match well the type (in Tring Museum) and one other—all available for comparison.

Blue Tit *Parus caeruleus georgicus*? (But.) (Nascha Ochota, 1908, Oct., p. 5—Achalzich Transcaucasia.)

Found at Dohuk, generally in pairs on the hillsides and in the valleys; first noted on October 29 and became common later. Obtained at Mosul in January. Seen at Kirkuk in winter. Seven specimens obtained W. 63-67.5. Material is unfortunately lacking for the determination of what race we have represented here. The Dohuk and Mosul birds are the same. I have seen no *persicus* in the same state of dress, but these birds are yellower below and not so grey above as the *persicus* I have seen; they are not *orientalis* (E. Russia) since they are greyer above than this race; *raddei* again (N. Persia) is a smaller bird W. 60-64.5 (6 examined) and is greyer and paler on the back and paler below; of *georgicus* (Western Transcaucasia) and of *satunini* (Lenkoran, Kasvin, etc.) I have seen no examples (? the same) and so hesitate to describe another new (?) race. The Blue Tits of this part of the world very badly want working out but there is no material available to do so. There are three birds in the British Museum labelled 'Asia Minor' one of which is the same as our Dohuk birds; the other two are quite different again. Meinertzhagen refers his Mosul birds to the typical race; his series measures exactly the same as ours, viz. W. 63-67. The Mosul-Dohuk birds are a greyer green above and a shade paler below than Scandinavian birds and do not run so large, the latter measuring up to 70 mm. in wing.

Penduline Tit. *Anthoscopus pendulinus persimilis*, Hart.

Two seen at Gurmata Ali April 19, 1921 and party of 10 at Zorr on the Tigris November 12, 1922.

Great Grey Shrike *Lanius excubitor aucheri*, Bp.

Two seen at Ramadi on November 2 one at Mosul January 20 (M). Both races evidently over winter.

Masked Shrike. *Lanius nubicus*. Licht.

Noted as early as April 3 at Baghdad. No further confirmation of breeding. A late straggler at Baghdad on December 29 (M).

Red-backed Shrike. *Lanius collurio*, L.

Still common at Baghdad and Fao as late as May 13 and are at Shaiba on June 4 on passage.

Isabelline Shrike. *Lanius isabellinus*. H and E.

In the former paper on Iraq, I stated on Dr. Bahr's authority, that the *Filaria* of this bird had the feather-louse for its intermediate host. I mistook what Dr. Bahr said; he only suggested to me that it might be so.

Red-tailed Shrike. *Lanius cristatus phoenicuroides*, Schal.

One at Babylon on November 8 (M) is somewhat late for this Shrike which unlike the preceding is a passage migrant in Iraq.

Grey Hypocolius. *Hypocolius ampelinus*. Bp.

Cox and Cheesman found a nest on May 16 near Baghdad in the centre of a bush of *Lycaum europaeum* containing 4 eggs. The nest was composed of tendrils of a creeper with a few bits of wood inside felted with wool and rush seed neatly interwoven; diameter of the cup 84 mm. Besides the berries of *Lycaum* mulberries, figs and dates are eaten. A breeding female lacks the usual black ends to the primaries and therefore presumably this species takes two years to become adult. Capt. Stanford found an unfinished nest at Baiji on May 10, an extension of range in Iraq, while Meinertzhagen records a small party at Mosul from November 23 to 26; a further extension. All evidence on further specimens tends to show that this species is frugivorous, a sequence being afforded by *Lycaum*, mulberry, fig and date. Four eggs measure 27.1 × 20.6, 25.6 × 19.4, 26 × 19.9, 24.6 × 19.5. The ground colour is pale greyish white, the faintly darker grey smears and blotches very pale and inconspicuous.

White-eared Bulbul. *Pycnonotus leucotis mesopotamiae*, Ticehurst.

In a loosely constructed nest found on May 30 two eggs had fallen through the lining and 4 more eggs had been laid on top. A nest with 2 eggs at Fao on June 30, probably a second brood. Cheesman met with a few in Date Groves at Kunjamchem R (1,000 feet) and again at Barg-i-Gez (2,500 feet) in October, both localities in the foothills east of Ali Gharbi. These were isolated groves many miles apart. La Personne says that the Bulbul breeds in the reed beds of the Medina (Euphrates) marshes. Absent from Mosul and Dohuk, as also is the date palm.

Spotted Flycatcher. *Muscicapa striata neumanni*, Poche.

Return passage noted as early as August 13.

Pied Flycatcher. *Muscicapa hypoleuca semitorquata*, Hom.

Specimens were obtained at Baghdad March 7 to 30 and on August 14; at Fao March 27 and April 13. 4 ♂♂ W. 82-85. 2 ♀♀ W. 80. The females are greyer and the males have a more distinct speculum than in the typical race. A somewhat scarce passage migrant.

Chiffchaff. *Phylloscopus collybita abietina*. (Nils.).

An increase noted on February 21; males in song. Both races over winter at Baghdad; Meinertzhagen records the typical form at Mosul on January 2.

Willow Wren. *Phylloscopus trochilus trochilus*, L.

One at Baghdad May 22, a late migrant.

Phylloscopus trochilus eversmanni. Bp. One at Mosul December 1 (M).

Cetti's Warbler. *Cettia cetti orientalis*, Trist.

A recognizable race. Paler than the typical form and smaller than the eastern *cettioides*. Noted in reed beds at Gurnat on April 19. Cheesman found odd birds in gardens in the foothills east of Ali Gharbi, October 10-15 probably on passage to the plains.

Moustached Sedge Warbler. *Luscinola melanopogon mimica*, Mad.

Several near Baghdad November 5.

Great Reed Warbler. *Acrocephalus arundinaceus*.

There can be little doubt I think that Great Reed Warblers breed in Iraq. At Qarradah near Baghdad on June 1, Cheesman found a bird singing in a fruit garden, there were no reeds or water in the vicinity, but it had been singing there for a fortnight previously; its organs were enlarged to breeding size. This bird is nearer to *A. arundinaceus* than to *zarudnyi*. Again on May 16 he found some at Zorr, and several in reed beds near Baghdad on May 7 but in these two cases evidence was not so suggestive, in fact in the latter case the birds were not there on June 25. Some of the birds obtained on these dates are *zarudnyi*; others are rather intermediate between these and the typical race.

Babylonian Reed Warbler. *Acrocephalus griseldis* (Hartlaub). (Abh. Nat. Ver. Bremen, xii, p. 7, 1891—Tanganyika).

After publication of the 'Birds of Mesopotamia' I found that *Acrocephalus babylonicus* is the same as *Calamoherpe griseldis* described from a unique specimen (in Tring Mus.) I have since seen this type from Nguru and another from Kilossa both in Tanganyika Territory, East Africa and allowing for the time of year they are identical with Iraq birds. The Babylonian Reed Warbler then breeds in a small area in Iraq and winters in a small area in East Africa so far as is known.

Cheesman found it breeding at Gurnat Ali on May 28, and took fresh eggs on June 30, La Personne found most had flown, but got one clutch of two incubated eggs. It nests freely in the Medina (Euphrates) marshes. The nest of reeds and grasses woven round two reed stems is 3 to 4 inches in diameter. Two birds were taken on a boat of Bubyau. (Fao district) on April 22. Tomlinson records that a nest of this bird had been appropriated by *Crateropus altirostris*.

Common Reed Warbler. *Acrocephalus scirpaceus scirpaceus* (Herm.).

Several seen at Gurmat Ali April 19, one obtained at Babylon May 1. No evidence of breeding.

Marsh Warbler. *Acrocephalus palustris* (Bechst.).

One shot by Sir Percy Cox in camel thorn scrub in the desert near Aqqar Quf on September 1. This is the first satisfactory record from Iraq.

Sedge Warbler. *Acrocephalus schœnobæus* (L.).

One obtained in the foothills east of Ali Gharbi on October 15, and one at Baghdad May 7, apparently a passage migrant.

Olivaceous Tree Warbler. *Hippolais pollida elœica* (Lind.).

Mr. Jourdain has suggested to me that clutches of six eggs for this bird are erroneous (as recorded xxviii, p. 277) it may be so—we have no further notes on such large clutches.

Icterine Warbler. *Hippolais icterius* (Vieillot). (Nouv. Dict., p. 194, 1817—France).

One was shot by Sir Percy Cox in the Iron Bridge Garden at Baghdad on May 19, 1922.

Barred Warbler. *Sylvia aisoria* (Bechst.).

Cheesman found the Barred Warbler not uncommon in mulberry trees on May 8, seen on return passage on August 29.

Orphee Warbler. *Sylvia hortensis*.

Sylvia hortensis crassirostris, Cretzschm. (Atlas Reise Ruppells, p. 49. P. 133 figs, 1826—Syria). One was obtained on April 3 at Baghdad.

Garden Warbler. *Sylvia simplex*, Latham.

The late passage of the Garden Warbler is confirmed; it was noted till May 23. Since writing the 'Birds of Mesopotamia' I have been able to examine a series of spring birds from Yeneseck in Siberia and these do not differ from British ones. Some of the Iraq birds are however decidedly greyer on the upper parts than British ones; *pallida* described from Barnaul and Kainsk, 700–800 miles S. W. of Yeneseck; some of the Iraq birds are paler than others.

Common Whitethroat. *Sylvia communis icterop* Menetr.

One at Baghdad on May 24, organs very advanced, it probably breeds in the higher lands at no great distance away. One taken on board off Fao April 16.

Blackcap. *Sylvia atricapilla atricapilla* (L.).

Not uncommon at Dohuk October 17, last seen November 1, noted by Meinertzhagen at Mosul up to early December.

Desert Warbler. *Sylvia nana nana* (Hemp. and Ehr.).

One in the British Museum from Fao March 19, 1896.

Menetries' Warbler. *Sylvia mystacea*, Menetr.

Noted in the foothills east of Ali Gharbi up to 1,500 feet October 4 to 9. Seen at Zobeir February 28.

Cheesman found nests with four (June 9) and five eggs on June 20 somewhat late and five is an unusual number. One on board off the Shat-al-Arab L.V. on March 29.

Spectacled Warbler. *Sylvia conspicillata conspicillata*, Temm.

(Man. d'Orn, 2nd ed. i, p. 210, 1820—Sardinia). One obtained in a grass field at Baghdad by Meinertzhagen on January 11, an addition to the Fauna (M).

Sardinian Warbler. *Sylvia melanocephala melanocephala*, Gm.

(Syst. Nat. i, 2, p. 970, 1788—Sardinia). Not uncommon at Mosul; specimens obtained January 1 and 21, 2♂ W.57 and 58 T.62.5. These are typical *melanocephala* and not *momus*.

Eastern Rufous Warbler. *Agrobates galactotes familiaris* (Menetr.)

Cheesman found a nest at Baghdad 6 feet up in a fork of an apricot; he notes that most nests contain pieces of snake skin which are added loosely after the nest is finished. It has been suggested to me by Mr. Jourdain that a clutch of 5 eggs is extremely rare; I do not think it is as rare as he thinks. As Mr. W. D. Cumming had paid special attention to the nidification of this species I asked him to send me any notes he had on it and this he has kindly done. He informed me that, though 4 is the usual number, but he personally had seen a fair number of nests with 5 eggs. He further stated that he had once found a nest in a hole in a telegraph post, and once found a nest used for two broods. Another nest he found had been begun by the *Hypocolius* and abandoned and then finished off by this Warbler. Both sexes build but only the female incubates. The young are fed on grasshoppers and caterpillars.

Streaked Wren Warbler. *Prinia gracilis*.

Prinia gracilis irakensis. Meinertzhagen (Bull. B.O.C., xliii, p. 147—Baghdad). Described as being near *palestinæ* darker upper parts with broader centres to the feathers. Subterminal black and white bar on the tail less distinct. When I first obtained this bird at Basra in 1918, I thought it to be different to *lepida* but found the darkness of the upper parts to be largely due to dirt, others from elsewhere in Iraq did not seem to be very different to *lepida* but the series was in very bad order. *Prinias* were noted at Mosul in January. A bird from Busnire is *lepida*, one from Fao is *irakensis* but another thence seemed to be nearer *lepida*. *irakensis* occurs at Kirkuk (M).

Fan-tailed Warbler. *Cisticola juncidis neurotica*, Meintz.

(Bull. B.O.C., xli, 1920, p. 25—Sidon.)

Found plentifully in beet-fields near Baghdad by Col. Meintzhagen on January 1. Only one skin received and that is moulting so it is still impossible for me to say what race inhabits Iraq. A series from Baghdad do not differ from Palestine birds (M).

Mesopotamian Babbler. *Crateropus altirostris*, Hart.

A nest at Fao on May 3. is described as composed of coarse reeds and date-palm leaves on the outside and lined with fine date fibre; diameter of the cup $3\frac{1}{4}$ inches; it contained 4 eggs. Common at Fao; further additional localities—Busra, Gurmet Ali, Abu Aran, Shafi; like *huttoni* it is said to inhabit reed beds too.

Hutton's Babbler. *Crateropus caudatus huttoni* (Blyth).

Found in the foot hills in bush covered desert east of Ali Gharbi and in gardens up to 1,400 feet.

Song Thrush. *Turdus philomelos philomelos*, Brehm.

Common at Dohuk in winter. Meinertzhagen says that Mesopotamian Song-Thrushes run large W. 119–123 (M). Possibly they average longer in wing but I find many of the typical race in W. Europe are between these measurements, though some are smaller.

Blackbird. 1 *Turdus merula syriaca*? H and E.2 *Turdus merula intermedius*. Richm.

The Blackbird is a not very uncommon winter visitor round Baghdad from the end of November to the end of February. Common in gardens at Dohuk and Mosul in winter.

The determination of the race or races is very difficult. I have examined a series of *aterrina* and *syriaca* in the Tring Museum and except that the former seems perhaps to have a slightly shorter tail I can see no difference in measurements. The larger bill of *syriaca* is not apparent.

Added to the difficulty is the fact that these *syriaca* are not breeding birds and so one does not really know that they are the resident bird at all. As regards colour both are dull black in the males and the females are so variable that no distinctive character stands out.

The Iraq series measure 7♂♂ W. 127–134; T. 106–115; Bill from base 24. 5–29 mm. 4♀♀ W. 123–127 T. 107–109; Bill from base 25–27 mm.

Meinertzhagen obtained a pair of *T. m. intermedius* at Feshkabur (M).

Rock Thrush. *Monticola saxatilis* (L.).

A few passed through Baghdad on May 4 to 17; noted at Fao April 30 and May 9.

Blue Rock Thrush. *Monticola solitarius longirostris*, Blyth (= *transcaspicus* auct.).

Seen at Zobeir on February 28, and in the foothills east of Ali Gharbi (1,200 feet) October 2, fairly common on the hills above Dohuk. On passage at Fao March 28, to April 22, single birds. Specimens from all these places are, I think, *longirostris* ♂ W. 120-125. ♀ W. 119-122.

Common Wheatear. *Ananthe ananthe*.

Ananthe ananthe rostrata. (H and E) (Synib Phys., i, fol. 2. a.a., 1832—Upper Egypt).

Further examination of Asiatic Wheatears leads me to think that there is one recognizable race characterized by the paleness of upper parts and wing-edges in both sexes and by a longer wing. Many of the Iraq birds stand out at once by the paleness and such birds I have never seen in Western Europe. The wings of the Iraq males measure 97-102 mm. which is an average longer wing than in West European birds. The length of bill is very variable in both eastern and western birds, Iraq males vary from 17 to 19 mm. The paleness of the wing-edges is noticeable in autumn also. I am not however convinced that two Asiatic races can be upheld and therefore I use the older name *rostrata* instead of *argentea*.

Black-eared Wheatear. *Ananthe hispanica*.

Ananthe hispanica melanolenca. (Güld) Still plentiful in the foot hills east of Ali Gharbi on October 16, extreme dates of spring passage at Baghdad April 3, and May 14, on the latter date a bird had its organs well advanced. Noted at Fao as early as March 26.

Barnes' Wheatear. *Ananthe finschii barnesi*. (Oates).

Meinertzhagen (*Ibis*, 1924, p. 615) considers that *barnesi* (Baluchistan) is not separable from *finschii* (N. E. Africa). At present I prefer to keep these separate. Baluchistan males are much longer in wing (up to 96 mm.) whereas the few Egyptian males I have seen are under 90 mm. Baluchistan females are on the mantle sandier brown, not so grey, and I have never seen any females with the black throat thence such as Egyptian birds shew; also in Egyptian females the axillaries are black edged with grey instead of dark grey edged with isabelline as in Baluchistan birds, and have darker ear coverts and whiter underparts.

All the females I have seen from Iraq have greyish throats but Meinertzhagen has seen females with black throats. It is possible therefore that both races occur; these chats are so far as we know winter visitors to the Iraq plains. The Iraq birds do not it is true attain quite the large dimensions of some Baluchistan ones and it is more than likely that they are come from an area where intergradation of the two races occurs but as they appeared to be nearer the Baluchistan races than the Egyptian I retain them under the above name.

Red-tailed Wheatear. *Ananthe xanthopyrymna*.

1. *Ananthe xanthopyrymna xanthopyrymna*. (H and E). One obtained on Dohuk Dorq on October 19, (2,000 ft.). Red-tailed Wheatears were seen at Chasmeh Sherin in the hills east of Ali Gharbi on October 12. Some were seen W of Ramadi, (41° 45' E. 33° 15' N.) on October 31 (M).

2. *Ananthe xanthopyrymna cummingi*. (Whit.). A female was obtained on Tang-i-Dorq, Dohuk on October 23.

Hume's Wheatear. *Ananthe alboniger*. (Hume).

Seen here and there in the foothills east of Ali Gharbi in October. Specimens obtained near Kunjam Chem R. (1,100 ft.), October 16. Obtained at Naft Khaneh on December 20 (M).

Mourning Wheatear. *Ananthe maesta*.

Ananthe maesta brooksbanki, Meinertzhagen. (Bull., B.O.C., xliii, 1923, p. 147—El. Jid, N. Arabia) Occurs at Rutbah Wells within political Iraq. 40° 15' E. 33° 5' N. on the Amman Ramadi route (M).

Stonechat. *Saxicola torquata*.

Both *ubicola* and *maura* were obtained at Dohuk in October and our records for both races range from the extreme north to the extreme south in winter.

Winchat. *Saxicola rubetra noskæ* (Tsch.)

Five more specimens obtained, from Diala R. in the north to the head of the Persian Gulf on passage; all are of this race and I rather doubt the typical form occurring. Noted as late as May 14 at Baghdad.

Common Redstart. *Phoenicurus phoenicurus*.

1. *Ph. ph. phoenicurus* (L.). A few must winter as already suggested; one obtained at Mosul on January 13.

2. *Ph. ph. mesoleuca* (H and E). Some arrive very early, one at Zobeir on February 28 and at Baghdad on March 4. Two females Baghdad May 13 and Fao June 30 appear to belong to this race being greyer above than the typical form; another, Fao, March 30 shows white wing edges as in the male. There is no evidence that it breeds at Fao. One obtained at Dohuk on October 17.

Black Redstart. *Phoenicurus ochruros phoenicuroides* (Moore).

One from Baghdad in December is the first record in that area. Meinertzhagen considered it to be the predominant race there (M).

Nightingale. *Luscinia megarhynchos africana* (Finsch and Reich).

A summer visitor breeding not uncommonly at Baghdad in gardens, etc. Nest with 2 eggs on May 22 another with 5 eggs June 1. Nests placed at the side of young date palms made of and lined with palm fibre. The eggs are greener than in the typical race and more inclined to spotting.

Thrush Nightingale. *Luscinia luscinia* (L.).

Only noted as spring passage migrant in the last week of April

Bluethroat. *Luscinia svecica magaa* (Zar. and Loud.).

This race arrives back regularly in the middle of August and must be a passage migrant only; all records refer to August and September. March and April; *volga* is the winter visitor and is not uncommon at Dohuk, Baghdad, etc.

Robin. *Erithacus rubecula*.

A series from Dohuk. Baghdad. Hills east of Ali Gharbi are *caucasicus*; one from Dohuk is *hyrcanus*.

White-throated Robin. *Irania gutturalis* (Guerin).

Evidently commoner on passage than supposed; several at Basra April 13 and Baghdad April 24 to May 9. Common at Amara early in April (Home). Cheesman saw one on a wire fence 'flying catching,' forsaking its usual skulking habits. One on August 2 is the first and only autumn record.

Hedge Accentor. *Prunella modularis*.

Prunella modularis orientalis (Sharpe) (Cat. B. Brit. Mus., vii, p. 652, 1883—Batoum).

The Hedge Accentor is common in vineyards and hedges at Mosul in winter; common too at Dohuk in December. These agree well with *orientalis* from Transcaucasia; *blanfordi* from Ispahan I have not seen but these do not agree with the description of it. 7 spec. W. ♂ 71-72; ♀ 68-70. Second primary exceeds the seventh by 0.5 mm. Occurs at Zacho and Feshkabur commonly in December (M).

Alpine Accentor. *Prunella collaris*.

Prunella collaris caucasicus (Tsch.) (Orn. Monat., p. 186, 1902—Vladicaucasus). The Alpine Accentor was common in Tang-i-Dorg (Dohuk), in winter in small flocks, sometimes with *Petronia p. exigua*. These agree well with *caucasicus*. W. 92-102.

Wren. *Troglodytes troglodytes*.

Troglodytes troglodytes hyrcanus Zar. and Loudon (Orn. Monat., p. 107, 1905-S. Caspian). The wren was obtained at Baghdad on November 17 and again at Mosul, January 18; seen at Kirkuk, rare in the plains; at Kasfir Monastery it was not uncommon on November 9 and also at Mangesh, Dohuk area. These are not as pale as *pallidus* and not so warm rufous as the typical form and more barred above and below. They resemble a series from Vladicaucasus. Common in winter at Mosul (M).

Common Swallow. *Hirundo rustica*.

Hirundo rustica rustica, L. Seen migrating over the mountains at Chasmet Sherin, going south in flocks on October 12. Arrived back at Baghdad as early as February 12.

Red-rumped Swallow. *Hirundo daurica*.

Hirundo daurica rufula, Temm. Cheesman found what was evidently an old nest of these birds in a cave in a cliff by the Changulac R., east of Ali Gharbi. It held a rotten egg, white with slight gloss 20.5 x 15 mm.

House Martin. *Delichon urbica*.

Delichon urbica meridionalis. (Hartert) (Vog. Pal. Fauna, p. 809—Algeria.) A pair were seen at Aqqar Qaf on February 23 and six noted flying north at DIALA R. over the desert on April 28. A male obtained. W. 104. Like all eastern birds this has a short wing. Two races of House Martins are described *meridionalis* (Algeria) and *alexandrovi* (Pamir, Turkestan) which only differ from the typical race in being slightly smaller. It would seem that Iraq, Persian and N. W. Indian birds are all shorter winged than the typical form and so until one can see whether Zarudny's *alexandrovi* is really distinct. I leave this race under Hartert's name; it appears to have a wide distribution.

Pale Crag-Martin. *Ptyonoprogne obsoleta obsoleta*, (Cab.).

One from Fao in the Brit. Mus. collected by W. D. Cumming.

Syrian Woodpecker. *Dryobates syriacus* H and E.

Cheesman found a few pairs in oak forest in the hills east of Ali Gharbi 3,000 ft. (Pir Mahommadi, Fittack, etc). Found here and there at Dohuk where it was also noted on cliff faces. Had formerly been recorded from Urfa which is outside Iraq territory. Common at Mosul, Dohuk and Zakhori in December (M).

Middle-spotted Woodpecker. *Dryobates medius*.

Dryobates medius sancti-johannis (Blanford) (Ibis, 1873, p. 6—Shiraz).

This Woodpecker was found here and there at Dohuk. The single specimen seems to belong to this race.

Wryneck. *Jynx torquilla torquilla*, L.

A few must remain over winter as two were obtained at Mosul on January 9; not very uncommon on passage.

Cuckoo. *Cuculus canorus*.

Cuculus canorus subtelephonus. Zarudny. (Mess. Orn., 1914, p. 108—Turkestan.) The Cuckoo was seen at Dohuk as late as October 26. A not uncommon passage migrant through the Iraq plains in April and September. When I wrote the *Birds of Mesopotamia* I had only seen a pair of adults ♂ 232 ♀ 212. The latter collection contains four adult females and these are easily picked out from a series of European birds by the paleness of the upper parts and throat. The fine barring of the underparts and small size. W. 190-206. They are smaller than *telephonus* and appear to agree well with Zarudny's description of *subtelephonus*; similar birds I have seen from Bushire and Karman in S. W. Persia, from Ala Kul, Karakol on the Oxus, Verroi, Tian Shan and Yarkand in Turkestan, and from Baluchistan obtained in May and July. (♂♂ W. 209-222; 4 ♀♀ 195-206. Two birds from Samarkand however are quite different, large, dark and coarsely barred and appear to belong to the typical form, these were obtained on May 6 and were very likely on passage. It appears to me therefore that there is a belt of country through Central Asia from W. Chinese Turkestan westward which is inhabited by a small pale Cuckoo whose

Cuckoo—(contd.)

distribution may reach to the highlands of Persia. The typical race occurs also in Iraq on passage.

Pallid Swift. *Micropus murinus murinus* (Brehm.).

Apparently very local. Seen at Zobeir on February 28, and at Baghdad where a few pairs bred in a ruined mosque hut not elsewhere in the city. One of these obtained belongs to this form and the suggestion that *pekinensis* also breeds in Baghdad (xxviii, p. 296) is not proved.

Great Spotted Cuckoo. *Clamator glandarius* (L) (Syst. Nat., Ed. x, p. 111, 1758-Gibraltar)

One was obtained at Baghdad on July 7, 1922 Status unknown, passage migrant? The first record in Iraq proper.

Nightjar. *Caprimulgus europæus*.

Caprimulgus europæus meridionalis Hartert (Ibis, 1896, p. 370-Greece.)

One which I refer to this race was obtained at Zorr near Baghdad on May 16. Further examples of *zarudnyi* and *unwini* were obtained on passage. One of the former on Boonah Is. on May 20.

Egyptian Nightjar. *Caprimugus ægyptius ægyptius*, Licht. 'Milahiyeh Alrayan.'

A nest with two eggs on July 16, is a late date.

Common Bee-eater. *Merops aplaster*, L.

Cheesman has seen this Bee-eater settle on the water to drink.

Persian Bee-eater. *Merops persicus persicus*, Pall.

Seen at Zobeir as early as February 28. Cheesman observes that the male feeds the sitting female and that in a colony eggs may often be found on the bare ground laid by birds whose holes are not fully excavated.

Hoopoe. *Upupa epops epops*, L.

Several at Zobeir by February 28. Breeds in Mosul and leaves in October.

Pied Kingfisher. *Ceryle rudis rudis*, L.

Found in the streams in the hills east of Ali Gharbi.

White-breasted Kingfisher. *Halcyon smyrnensis smyrnensis*, L.

Hilla and Khanikin are added as winter localities for this species (M).

Indian Roller. *Coracias benghalensis benghalensis*. (L).

Nest with two eggs at Fao on June 11. Noted up the Euphrates to Nasiriyeh. (M).

Eagle Owl. *Bubo bubo ruthennis* (But. and Zhitkov.)

The Eagle Owl though local is commoner than it was thought to be, and further specimens were obtained from Abu Ghraib and Aqqar Quf near Baghdad, Kirkuk and Tybi River in Luristan. In all I have examined six males, three females and three unsexed; all appear to be the same and resemble birds from Trebizond. ♂ W. 415-440; ♀ W. 440-480. Zarudny's small race *nikolskii* (Arabistan) is still shrouded in mystery but I may remark that a bird from Bushire is large (W. 440) and resembles the rest of our birds.

A bird from Kirkuk on February 16 was almost in breeding condition. Cheesman notes that one he disturbed from a canal bank flew out into a ploughed field and squatted like a hare.

Fish Owl. *Ketupa zeylonensis*.

Ketupa zeylonensis semenovi, Zar. (Orn. Jahrb., xvi, p. 141, 1905-Arabistan). Cheesman obtained a pair out of a cave at Basha Daraz in the hills east of Ali Gharhi (1,300 ft.) on October 19. It is presumably resident. I keep these for the present under Zarudny's name, though they do not seem very different to the North Indian *leschenaulti*; and these two are practically topo-types of *semenovi*; a larger series is needed to settle the point. ♂ W. 423; ♀ 405 mm. Extra limital species.

Striated Scops Owl. *Otus brucei* (Hume).

Resident and breeds round and in Baghdad and at Hilla, not very uncommonly, also at Basra. A pair which bred in the Residency garden had young on the wing on July 6. Another pair in Baghdad had a nest in a hollow date palm, the hole being eighteen inches deep; this pair became very tame and used to come down on to the mess table at night and catch moths and mole crickets attracted by the electric light. In the nest were the remains of House Sparrows. The young in the nest make a sort of wheezing noise; the old birds start booming in the first days of March. A nest at Hilla contained five eggs on April 27; this nest too was in a date palm, twenty feet up. The eggs measure 31×25 mm.

Long-eared Owl. *Asio otus*.

Asio otus otus, (L.). One in camel thorn bushes on the desert near Baghdad on January 14.

Little Owl. *Athene noctua bactriana*, Hutton.

Palestine and Iraq Little Owls vary considerably. If *lilith* be a good race, (and the types from Deir-ez-Zor between Dair and Aleppo on the Euphrates seemed to me to be distinct, although unique), then it must be a local desert race; for the birds from Palestine (Lebanon, Judaea, Tabor, Kutifah N. of Daur) I cannot separate from Kandahar birds (*bactriana*). The recent series from Iraq vary much in colour according to the time of year and not a little individually. One from the Jebel Hamrin at Abu Ghraib is nearly as dark as *glauca*, birds from Dohuk are nearer *bactriana* but darker, paler than *glauca*. The feathering on the toes varies much; fresh-moulted birds are always more feathered, worn ones more bristly. A fresh-moulted bird from Damascus is fully feathered on the toes.

Tawny Owl. *Strix aluco*.

Strix aluco sanctinicolai (Zar.) (Orn. Monat., 1905, p. 49—Bactiara in W. Persia). Three Tawny Owls were secured at Dohuk in December in large shady trees in gardens and nullahs. These are paler grey than the greyest British form, no trace of brown at all in the plumage; abdomen whiter. They quite resemble Mr. Witherby's birds from S. W. Persia. Two males measure W. 266-270 female 255 mm. The fourth primary is just longer than the fifth which is just longer than the third. Possibly the sexing is wrong?

Barn Owl. *Tyto alba alba* (Scop).

A nest with large young in a roof of a house on June 28. A series from Baghdad and Feinja were obtained. These vary in colour but none is rusty below, all being white; three being spotted with black and three not. On the back the amount of grey varies much, one bird in its greyiness above and spotting below approaches very near to *guttata* but the whole series can be matched with British birds. In the *Bull. B. O. C.*, xliii, p. 24 Mr. P. L. Slater names the South Arabian Barn Owl as *erlangeri* distinguished by its paleness and by having the tarsi and toes almost bare. He assigns birds from Babylon to this race; our series however do not bear out this determination and I cannot differentiate Iraq birds from British ones.

Saker Falcon. *Falco cherrug*.

These falcons, which are much used for falconry in Iraq, are known by various names according to the districts in which they are taken—viz., *Hurr al Hamar*, *Hurr al Farsi*, *Hurr al Badree*. Hawks of any kind taken as downy young are *Wachere*; birds of the year taken in nets *Lafeef*, birds after first moult *Holee* and after second moult *Jernaas*.

Capt. Stanford informs me that a pair of Falcons which he thought were certainly Peregrines nest in a high cliff at Tekrit, they lived on Rock Pigeons and could take Sand grouse in full flight; they were perhaps Sakers which are said by Arabs to breed in the Jebel Hamrin in the Diale area. Common round Mosul in winter (M).

Merlin. *Falco aesalon*.

Falco aesalon aesalon, Tunst. (Orn. Brit. i, 1771—England) Meinerzhagen says that Merlins are common round Mosul in winter and of the specimens he

Merlin—(contd.)

obtained one belongs to the typical form, one is *insignis* and three are *pallidus*. He obtained another *pallidus* at Babylon (M). We have *insignis* from Dohuk and Baghdad.

Imperial Eagle. *Aquila heliaca*.

Aquila heliaca heliaca, Sav. Frequently seen at Baghdad, Mosul and Erbil in winter; a male shot at Baghdad had been feeding on a Chukar, the bird must have flown some distance as there is no chukar ground nearer than forty miles from Baghdad (M).

Steppe Eagle *Aquila nipalensis*.

Aquila nipalensis orientalis Cab. (J.F.O., 1854, p. 369—Volga). Apparently common at Baghdad in winter (M).

Tawny Eagle. *Aquila rapax*.

Tawny Eagles noted near Ramadi on November 1 (M).

Marsh Harrier. *Circus aeruginosus*.

Circus aeruginosus aeruginosus (L). Nests were found at Babylon with one egg on May 1 and at Hindeyah Barrage with one and four eggs on May 29.

Sparrow Hawk. *Accipiter nisus*.

Accipiter nisus nisosimilis (Sick). Probably common as a winter visitor, four specimens obtained. No confirmation has been obtained of any Sparrowhawk breeding in Iraq.

Black Kite. *Milvus migrans*.

Milvus migrans migrans, Bodd. Black Kites leave Baghdad between April 17–24; they are common at Mosul in winter but none is at Dohuk at that season.

Large Black Kite. *Milvus lineatus* (Gray).

A female obtained near Baghdad on January 20, W. 513.

Honey Buzzard. *Pernis apivorus apivorus* (L).

One obtained at Boonah Is on June 10; organs slightly enlarged. It must have been a straggler on passage.

Griffon Vulture. *Gyps fulvus*.

A party of 15 seen near Ramadi on November 1, and some near Zakho and Dohuk in December (M).

Cinereous Vulture. *Ægyptius monachus* (L). (Syst. Nat. Ed. xii, p. 122, 1766—Arabia).

Three seen fifteen miles W. of El. Jid on the Amman-Ramadi route on October 29. (M).

Lammergeier. *Gypaetus barbatus*.

Three seen in the hills east of Ali Gharbi on October 11 (2,500 ft.) by Cheesman. Frequent at Zakho and Dohuk in December. (M).

Egyptian Vulture. *Neophron percnopterus percnopterus* (L) 'Khomer'

The date of nesting (xxviii, p. 315) should be May 20.

White Pelican. *Pelecanus onocrotalus*. 'Naj-al-mai'.

Pelecanus onocrotalus onocrotalus L. Sir Percy Cox made every endeavour to clear up the status of Pelicans in Iraq and sent his collector, La Personne, on several trips to likely breeding grounds. From information sent to me by the late Mr. W. D. Cumming it appears that he found Pelicans breeding on the creeks between the Khor Musa and the Khor Bunder in 1884. Another breeding place was between Dohuk and Khor Dhawir.—Bunder has grown in importance since 1884 owing to the demand for rock and sand for building purposes and when La Personne visited Mr. Cumming's localities no signs of

White Pelican—(contd.)

any Pelican colonies were to be found. It was probably from one of these localities that Mr. Cumming obtained the *crispus* chick referred to (xxviii, p. 325). La Personne was more fortunate on Bubyen Island. On his visit there on April 18, 1922, adults were seen also a few young in down; on one part of the island the carcasses of about 100 adults and twenty young in down were found and it appeared that some epidemic had swept off most of the colony. On another islet near by more dead adults and young were discovered. On visiting this islet again on April 1, 1923 it was found that at highwater not more than six inches of land stood above water and the area therefore was much reduced; on this the pelicans were nesting; very slight nests were made. A good many eggs and young were seen and again a number of dead birds. Two adults were obtained for identification with difficulty, owing to their extreme shyness recourse had to be made to lying up at night for them. The young in down walk with difficulty but swim with expert ease. When being fed they reach so far down the parents' gullet that little remains visible outside the parents' bill except their legs kicking in the air.

According to Arab testimony Pelicans used to breed on Boonah and Warba Islands sixteen to twenty years ago. Pelicans were seen with fully grown young on the Barmanshir River on June 10, 1921 and near Abadan Island June 27. The adults from Bubyen belong to the typical race as also one from Fao May 22. ♂ W. 700 mm.; Bill from gape 17 inches.

♀ W. 635 and 640 mm.; Bill from gape 14 inches.

Common Cormorant. *Phalacrocorax carbo*.

Noted on the Tigris at Mosul and Feshkabur and at Khanikin (M).

Pygmy Cormorant. *Phalacrocorax pygmaeus* (Pall.).

In the Medina marshes, Euphrates, at Beni Mansur (twenty miles north of Medina) the Pygmy Cormorant was found breeding in large numbers on July 12. The water here was four to six feet deep and the dense reed beds fourteen feet high. Here the colonies of Cormorants were nesting on the broken down reeds in clusters occupying a space of about 200 square yards and, of all the water birds nesting there, were only outnumbered by Night Herons. The nests were about 4 feet above the water and mostly held three to five eggs but one nest contained four eggs and three young. Similar colonies were found near Anzha village in the Rotha Marshes (sixteen miles from Qurnah on the Tigris) on July 23. Cormorants were breeding in vast numbers together with Darters and Ibises. Noted on the Lesser Zeb. R. in winter (Kirkuk area).

Though especially looked for, Cheesman was unable to verify the reported occurrence of Shags on the Tigris.

African Darter. *Anhinga rufus* (Lacep).

A few were found nesting at Beni Mansur amongst the colonies of herons and Pygmy Cormorants on July 12, the nests were placed on broken down reeds in reed beds fourteen feet high and four to six feet above the water. The nests contained mostly three eggs. In the Rotha marshes, in the same place as described above, they were nesting in great numbers.

An examination of two more Iraq specimens confirms what I said before—that the Iraq bird is not separable from the East African.

Red-breasted Goose. *Branta ruficollis*, Pall. (Spicil. Zool. fasc., vi, 1769, p. 21 tab iv. N. Siberia).

Pitman's and Thornhill's suspicions have been fully confirmed. *B.N.H.S. Journal*, xxx, p. 228 Major O. G. Kiernaender records that a single adult was obtained at Abu Jisra on February 17, 1924.

Grey Lag Goose. *Anser anser* (L) 'But.'

Meinertzhagen considered this goose to be commoner south of Baghdad, *albifrons* the commoner north of that city. (M).

Common Shelduck. *Tadorna tadorna* (L) 'See-nee'.

Gadwall. *Anas strepera* (L) 'Chesham'.

Pintail. *Anas acuta*. (L) 'Hosha'.

Mallard. *Anas platyrhynchos* (L) 'Khedary'.

Cheesman saw a pair in a wood near Baghdad on May 16, and he felt certain that they were breeding there.

Marbled Duck. *Anas angustirostris* Menetr.

In the same wood Cheesman saw five or six pairs of Marbled Teal. Noted in winter on the Diala R. but not at Mosul.

Teal. *Querquedula crecca* (L) 'Hadaf'.

Golden Eye. *Glaucion clangula* (L).

Two at Baiji and Mosul in winter.

Smew. *Mergus albellus* (L).

Diala, March; Mosul, February.

Merganser. *Mergus serrator* (L) (Syst. Nat. Ed. x, p. 129, 1758—Sweden).

Sir Percy Cox met with a pair at Gubban and one in the Khor Khanaki at the head of the Persian Gulf on May 22, 1907.

Flamingo. *Phoenicopterus ruber antiquorum*, Temm.

On May 21, 1921. Flamingoes were seen on Bubyen Island and a rotten egg was picked up. On April 7, 1922, a colony of about 500 pairs was located on Bubyen up the Khor Milah nesting on a slightly raised stretch of sand covered with low scrub. The nests, situated on bare dry sand within a foot of each other and just above high water mark, were either mounds of sand raised above the level or else the egg was laid on the level sand and the surrounding sand scooped away leaving the egg on the mound. The nests measured one foot in diameter and contained one egg, rarely two. When on the nest the scapulars are raised up in the form of a fan; the nearest approach to the sitting birds was 100 yards. Subsequently the colony deserted and by May 30, had laid again in another part of the Khor but most of the eggs had been washed away by a big tide. The young in down swims with ease. On April 1, 1923, no Flamingoes were seen on Bubyen.

Common Heron. *Ardea cinerea cinerea* L.

On May 21, 1921 and May 30, 1922, the Common Heron was found nesting amongst a colony of *Demigretta asha* on a ridge covered with salt bush on Bubyen Island. The nests were either built on the bushes, or on the bare ground in which case they were considerable structures. On April 1, 1923, the birds had just begun to lay, two nests containing single eggs. It was found breeding on Warba Island in May 1906 by Sir Percy Cox and several nests with three or four eggs were found there on May 19, 1921.

Gollath Heron. *Ardea gollath*, Cretzschmar.

I have now been able to examine one fully adult female, one sub-adult, no sex, and one half-grown young one from Iraq; the two grown birds measure:

Ad. W. 580; bill from angle of forehead feathers 177; Ts. 235 mm.

W. 540 " " " " 175 " 205 "

They are not distinguishable either in colour or size from birds from East Africa, whence came Cretzschmar's type. In the British Museum there is only one adult from the west side of Africa, also a female, and this is a noticeably smaller bird with a darker chestnut head and neck and underparts and darker blue on the back, it was obtained in Portuguese Guinea. It measures W. 510, B. 157, Ts. 190 mm. It will probably be found that this is a well marked race but I do not care to name it on one specimen.

Reef Heron. *Demigretta aspera asha*. (Sykes).

On Bubyen Island four colonies were located. The blue and white phase was noted in each colony and about in the proportion of three to one. One colony consisted of about 25 nests built on the salt bushes just above high water mark

Reef Heron—(contd.)

and on April 18, 1922, mostly held three eggs in each. On April 1, 1923, building had commenced. Similar colonies were found by Sir Percy Cox on Warba Island on May 30, 1906, the blue phase again predominating while other colonies were located up the Khor Khannaka and Khor Musa, May 24, 1907. A colony up the Khor Bunder consisted of 20-30 pairs of birds mostly of the white phase. On Gabr-un-nakoda a good many pairs were nesting on May 28, 1923, here blue and white phases again were in the same colony and after watching the nests for 3 days La Personne came to the conclusion that the white did not in any case pair with the blue (see also Ibis, 1923, p. 270) but one blue one with a white patch on the wing was mated to a wholly blue bird. The colony had fresh eggs, mostly four. The nests are smaller than those of *Ardea cinerea*. On Dara Island a small colony was discovered and some had hatched on May 26.

Squacco Heron. *Ardeola ralloides ralloides* (Scopo).

The Squacco Heron certainly breeds in the Iraq marshes. Young birds were sent from Abid north of Qurnah on July 19. In the Medina marches, at Beni Mansur, it was found to be nesting freely among the colonies of Night Herons, Darters, etc., preferring isolated clumps of reeds. The nests contained 4 to 5 eggs on July 12. A further winter record is furnished from Baghdad on December 15, while it is recorded from Fao on March 2, so probably some over winter.

Night Heron. *Nycticorax nycticorax nycticorax* (L).

Vast numbers breed in the Medina marches at Beni Mansur. The nests were placed on broken down reeds two feet above the water inside or on the edge of a cluster of reeds. The nests, compact affairs of reed, had quantities of droppings scattered all over them giving the appearance of being used year after year. On July 12, most nests held 4 eggs. The birds were nesting in company with Squacco Herons and Cormorants. Common at Mosul in winter.

Little Bittern. *Ixobrychus minutus minutus* (L).

A nest with four eggs on June 30, at Gurmat Ali. Common at Mosul in autumn.

Common Bittern. *Botaurus stellaris stellaris* (L).

There is considerable suspicion that the Common Bittern is at all events partly resident as Cox and Cheesman heard it 'booming' in the Hindeyeh marshes on May 29 and 30. I cannot distinguish any eastern race (*orientalis* Buturlin) of this bird.

White Stork. *Ciconia ciconia ciconia* (L).

At Beled Cheesman found Storks nesting on telegraph wires; the sticks were laid on the wires close to the pole and nearly every pole had its nest. The telegraph service did not seem to suffer in any way. Breeds at Mosul.

Spoonbill. *Platalea tencorodia major* Tem and Schl. 'Mifrid'.

Eggs were brought in from the Qurnah marshes on June 21, mostly incubated. A flock seen on Dara Island, May 26. A nest with 3 eggs taken on the Khor Milah, Bubyah Island June 1, 1922. Spoonbills were breeding on Warba Island, May 19, 1907. A colony of 8 or 12 nests was located up the Khor Khannaka (Khor Musa) May 24, 1907, and another colony up the Khor Bunder amongst the Reef Herons.

Red-checked Ibis. *Comatibis emerita* (L).

Seen near Kirkuk January 21, 1923 (Robb).

White Ibis. *Threskiornis aethiopicus* (Lath.).

The Sacred Ibis was found breeding in the Rotha marshes near Qurnah; on July 23, most had young on the wing but four nests with 3 to 4 eggs were found. They did not appear to breed in separate colonies but were mingled with the Cormorants, Darters, etc. About 20 pairs were seen altogether. It also breeds at Abid in the same area. Noted at Baiji in April. (Stanford).

Common Crane. *Megalornis grus* (L.).

Great numbers arrived in the Mosul district when the rains broke at the end of November and in early December going N. W. to S.W. at 4,000 feet altitude (M).

Demoiselle Crane. *Anthropoides virgo* (L.).

At the same time as the Common Crane flocks of these birds were passing over Mosul (M).

Great Bustard. *Otis tarda* (L.).

Arrives Mosul district in September. Common Kirkuk district, December, from an aeroplane 180 counted in one day January 21, 1923, between Altus Kufri and Kirkuk (Robb).

Houbara. *Chlamydotis undulata macqueeni* (Gray).

One brought into Baghdad on April 18, contained a soft-shelled egg. Mr. Philby found a nest with 3 eggs on March 31, between Zobeir and Hafar-el-Batin on the Arabian side. The crops of three birds shot in November contained 1. Black ants, 2. Black, and white ants, 3. Large Beetles.

Little Bustard. *Otis tetrax*.

A female shot by Capt. Stanford at Mosul January, 1921.

Stone Curlew. *Burhinus oedipnemos*.

Unfortunately the collection does not supply any material to determine the breeding race of Stone Curlew. Cheesman says a pair were evidently breeding on the Chaldari sand bank at Baghdad on June 26. A flock of 50 were seen at Anerun in the foothills on October 4, and one obtained is *astutus*, as is one from Daura near Baghdad on March 6. One from Baghdad on September 12 is, from the more rufescent colour of the upper parts, indistinguishable from *saharae*.

Cream-coloured Courser. *Cursorius cursor cursor* (= *gallicus*).

'Abd-ul-Gutta' (= slave of the Sand-grouse).

A pair at Feluja on April 25 were obviously about to breed. Breeds at Tekrit and seen June 2 at Mosul.

Common Pratincole. *Glareola pratincola pratincola* (L) 'Sevwad'.

Colonies were found at Hindayah Barrage on May 30 and many nests were found by following a man's footprints in the then dried mud. Another colony exists at Iskandariyeh and several nests still contained eggs on June 23.

Black-winged Pratincole. *Glareola uordmanni*, Fischer.

A wounded bird was picked up near Baghdad on November 2.

Woodcock. *Scolopax rusticola* L.

One at Baghdad on December 6, 1921. One Khanikin in March, one near Kirkuk, January 6. Quite common at Mosul, Dohuk, Zakho in winter, one Khanikin, December (M).

Common Snipe *Gallinago gallinago* (L) 'Wis-was' 'Ferar', 'Huwaidi'.

Terek Sandpiper. *Terekia cinerea* (Guild).

A small flock on Bubvan Island on April 9.

Little Stint. *Erolia minuta minuta* (Leisler).

Returned to Baghdad by July 23.

Curlew Sandpiper. *Erolia ferruginea* (Brun).

One at Fao April 23 and one on Boonah Island on June 10, both in breeding dress.

Ruff. *Machetes pugnax* (L)

Noted at Baghdad by August 26, an adult female on September 12 is in almost full winter dress.

Redshank. *Totanus totanus*.

Totanus totanus eurhinus. Oberholser (Proc. U. S. Nat. Mus., xxii, p. 207, 1900-Ladak).

One at Baghdad on August 26 and three from Fao on March 20 belong to the eastern race. Meinertzhagen obtained both forms at Dohuk in December (M).

Spotted Redshank. *Totanus stagnatilis*, Bechst.

One obtained at Baghdad on January 27. Fairly common in winter especially at Baghdad (M.)

Wood Sandpiper *Tringa glareola* L.

Noted at Baghdad on December 1; few winter records.

Bar-tailed Godwit. *Limosa lapponica lapponica* (L).

A flock breeding dress on Bubyar Island on April 27.

Curlew. *Numenius arquata*.

Numenius arquata lineatus, Cuv. (Reg. Amm. nouv, ed. i, p. 521. 1829 India). One obtained at Fao on April 15 belongs to this race.

Black-winged Stilt. *Himantopus himantopus himantopus* (L) 'Kursu'.

Nesting plentifully at Hindia Barrage on May 29. When the nests are on the dried mud or 'bunds' only a few bits of grass are utilized but where the ground is swampy a good foundation of grass and sticks is made; one nest was found in a green tuft of grass. On disturbing the colony the birds fly round screaming, then swooping down to the ground they stand flapping their wings to attract attention; also found breeding at Beled.

Kentish Plover. *Charadrius alexandrinus alexandrinus*. L. 'D'haarig'.

A nest with two eggs at Iskandaryeh on June 23; at Fao it breeds as early as April 2 when a nest with 3 eggs was found.

Sociable Lapwing. *Chettusia gregaria* (Pall.).

Recorded from Feluja, Aqqar Quf and Sheik Said; earliest September 25

White-tailed Lapwing. *Chettusia leucura* (Licht) 'Tagallaga'.

Nesting in numbers by the Iskandariyeh canal on May 29 in flooded rice and grass. The birds raise up the height of the nest by bringing mud in their bills and building up quite a shallow cup-shaped mound of mud to which a few sticks are added. The juvenile has the upper parts black with broad rufous brown edges, underparts creamy white.

Red-wattled Lapwing. *Sarcogrammus indicus algeri*, Laubm.

Noted at Barzia and Saifee in the hills east of Ali Gharbi (1,000 ft.) early in October. At Aqqar Quf Cheesman found a nest built up with small clods of mud brought by the bird; it contained 4 eggs on June 11, the bird crept away and made no demonstration—an unusual trait.

Common Lapwing. *Vanellus vanellus* (L).

Flocks crossing the Jebel Abiad going south on December 13. (Dohuk area).

Crab Plover. *Dromas ardeola*, Paykull.

On Dara Island the north end and part of the east bank is riddled with the holes of the Crab Plover. The nest tunnel is burrowed obliquely into the sand to a depth of 1½ feet and a length of usually 3 to 4 feet, a slight enlargement at the end of the tunnel serving as a nest-chamber. No nest is made and a single egg only is laid. The tunnel is excavated by the birds themselves, using their feet and probably also their bills, the loose sand being scratched out behind the working bird at a good rate just as if a miniature shovel were at work. In one tunnel examined there were four bends and the excavation went

Crab Plover—(contd.)

in 8 to 9 feet. The birds fly out of their holes at the least sign of danger, one bird usually being on guard outside, but they soon return to the vicinity of the nest hole uttering their shrill notes *Tchuck-tchuck chuck-chuck-chuck* while at night a continuous *Tchuck-tchuck* is kept up. Eggs were plentiful on May 26 and young in down were obtained by June 7; the latter are helpless and cannot run or even walk. They are fed on the flesh of crabs which are broken up by the parents before being brought to the nest hole. In 1921 it was estimated that there were over 300 pairs and in 1922 about 500 pairs breeding on Dara. On February 26 not a bird as yet had come to the island.

The Crab Plover also breeds in great quantities on Boonah Island in the higher sand banks. In the hard dry soil the holes only went in 4 feet but others had been increased up to 10 feet in length, presumably further excavations of old holes. Here the Arabs had recently collected 600-700 eggs. It also nests freely on Warba Island. All eggs received are absolutely pure white without any signs of spots (Stuart Baker).

Herring Gull. *Larus argentatus vegæ*. Palmen (Vega-Exp. Vetensk. Arb., v, p. 370, 1887—Arctic coast, Siberia.)

Two adults obtained at Baghdad on November 28 and December 29. Correspond best with *vegæ*; they are certainly too dark on the mantle for *cachinnans*; one had the legs and feet greenish and the other yellow, eyelids of both were coral-red. They are as dark or even darker than a series of *vegæ* from China whence however come birds also as pale as birds from the Mediterranean. Like *vegæ* too these Iraq birds have coarse streaks on the back of the neck and head which in *cachinnans* are usually finer, indeed in winter birds from Sind the streaking is almost absent. Two Iraq skins from the old Euphrates expedition are also referable to *vegæ*.

Richardson's Skua. *Stercorarius parasiticus* (L.) (Syst. Nat. Ed. x, p. 136, 1758—Scandinavian coast.)

W. D. Cumming informed me that he saw one once near the Khor Musa—probably early in spring.

Slender-bill Gull. *Larus genel* Brene (= *gelastes*).

Local movements up the Tigris to the breeding grounds were noted between April 17 and 24. Found breeding at Iskandariyeh on June 15 when a nest with 3 eggs taken. On Boonah Island a few were seen on May 28, 1921, but nests with one to three eggs were found on May 21, 1921. On May 30, 1922, great numbers were nesting there, some were already hatched but many nests had been flooded out by a big tide. On the Pelican islet nests were built on the carcasses of Pelicans. On Warba Island this gull was found breeding with Caspian Terns on May 30, 1906, a few had then incubated eggs, most had hatched. Breeding freely there with Gull-billed Terns on the N.E. side on May 19, 1921, laying had just begun and 31 nests of the two species were counted in an area of 5 yards square. On April 5, 1921 the birds had just arrived for breeding purposes. The nests are made of the twigs of a salt bush (*Sueda*?). Further colonies were located on the Bu Saif coast near the Khor Musa and fresh eggs were found on June 12—probably the first nests had been flooded out. The Arab name for this gull is 'Simachi Harimi', i.e., forbidden by the Quran to be 'halaled'.

Whiskered Tern. *Chlidonias (Hydrochelidon) leucopareia leucopareia* (Temm.). 'Sinaach'.

Eggs and parent birds were sent from the Ruwayieh marshes on July 14, the eggs being mostly incubated. A few still had eggs on July 27 when La Personne visited these marshes near the Iskandariyeh canal.

White-winged Black Tern. *Chlidonias (Hydrochelidon) leucoptera*. (Temm.).

Found breeding in large colonies with Common Terns in shallow inundation on the Ruwayieh marshes near Iskandariyeh Canal on July 27. The nests composed of weed and mud were 6 inches across. At this date most have finished breeding but two nests with one and two eggs were found. Attracted by beetles and locusts disturbed by harvesters cutting corn, a flock of 30 were seen at Diala beating up and down over the fields.

Little Tern. *Sterna albifrons albifrons* Pall (= *minuta*).

Breeds freely on Abadan, Dara and Boonah Islands. A few still with eggs on June 27. Fresh eggs found on May 20, two sometimes three. All specimens obtained at the head of the Gulf belong to this, the typical form.

Large Crested Tern. *Sterna bergii velox* Cretzschm.

On Boonah Island four pairs were found nesting amongst a colony of *bengalensis* and they had fresh single eggs on June 10, 1922.

In colouration these eggs run through the usual known variations, the ground colour being white to cream, with markings of deep blackish-brown. These markings consist, in some cases, of big scattered blotches, in others of numerous small spots, and in others again of long twisted lines, such as have given rise to the idea among Mahomedans on the Red Sea, that this bird tries to write verses from the Koran on its eggs. In a few cases the markings are deep chestnut, and in still fewer a pale reddish-brown. In none of the eggs taken in this collection is the ground colour of a beautiful deep salmon tint such as is frequently found in eggs laid both on Astola Island, further south in the Gulf, and also on many islands in the Red Sea. The eggs in this series vary in length from 56.5 by 43.0 to 68.0 by 47.5. This latter egg is also the broadest in the series, the most narrow being 62 by 40 mm. (Stuart Baker).

Lesser Crested Tern. *Sterna bengalensis bengalensis* (Less).

This Tern was found nesting on shingle and sand at the south end of Boonah Island in colonies of 30-40 pairs. No nest is made and only one egg, according to La Personne, is laid. The nests are very close packed and 37 were found in a space of 3 yards square on May 20, 1922. On May 28, 1921, a hundred pairs were located on the east side nesting on a sand spit just above highwater mark. In June 1922 the colonies at the south end were flooded out and on June 10 were just beginning to lay again. Other colonies exist on Buhyan Island (up the Khor Milah) and on Warba Island (N.E. coast) where on May 26, 1922, a few had hatched. Of these eggs the collectors took both single and two eggs in the clutch, but in no case three, and probably clutches of this number are very exceptional. In colouration they run through much the same variation as does *Sterna bergii velox*, but on the whole they are less handsome and the ground colour is less often cream or salmon. In measurements, the series run from 50.0 × 35.8 to 54.5 × 38.5 mm. In both instances the extremes of length and breadth are found in the same egg. (Stuart Baker).

White checked Tern. *Sterna repressa*, Hartert (= *albigena* auct).

(Nov. Zool., 1916, p. 288—Persian Gulf).

On Dara Island this Tern nests all along the N. E. and N. beaches a few feet above high water mark. Slight mounds of sand four inches high are scratched up on which a few twigs are placed; on May 26, 1921, the nests held single eggs. Also found breeding sparingly on the N.E. beaches on Boonah Island in 1921 and 1922. In 1906 and 1907 it bred on Warba Is., fresh eggs being found on May 19, but it is unrecorded thence in 1921 and 1922.

A considerable series of these eggs were taken on Dara Island on May 26, 1921, and on Boonah Island on 28th of the same month. A clutch generally consists of a single egg, but there are a fair number of pairs also in the collection. The following eggs seem worthy of particular notice:—

(1) A pure white ground with a few faint grey blotches. The shell of this egg is stout and normal and does not appear to have been laid by a bird in a more or less exhausted state. (2) Ground colour, a very deep cream red, the whole surface richly blotched and spotted red-brown and with small secondary blotches of purple neutral tint. (3) Ground colour, a pale cream with a few pale reddish and lavender smears and blotches. (4) Ground colour, a light buff with dark red-brown primary blotches and spots, and with exceptionally large and dark lavender secondary marks. The extremes of size in the series, are minima 37.1 × 28.3; maxima 45.3 by 28.3 and 43.4 × 32.4 mm.

(Stuart Baker).

Caspian Tern. *Sterna caspia caspia*, Pall.

A single pair nested on the sandy beach at the north end of Dara Island where its two eggs were found on May 26. On Boonah Island three pairs

Caspian Tern—(contd.)

nested amongst the colony of *bengalensis* at the south end in May 1921 and 1922. Two nests with one and two eggs May 20. A few pairs bred on Warba Island in 1906, where on May 30, most had hatched. None there in 1907, 1921 or 1922. Breeding there April 3, 1878 (Hume's Nests and Eggs.)

Lesser Sooty Tern. *Sterna naethetus*.

Sterna naethetus fuligula, Licht. (Forster's Desc, Anim, p. 276, 1844—Red Sea). Breeds freely on Dara Island; the nest is a mere depression in the sand under cover of a salt bush, and at times almost a tunnel leads to the nest. On May 26, 1921 it was estimated that there were about 100 pairs and the next year on June 5, about 350 pairs; only a single egg is laid and while the female incubates the male sits on the top of a neighbouring bush. None on Boonah Island in 1921 but on May 20, 1922 it was breeding numerous there.

Gull-billed Tern. *Sterna (Geochelidon) nilotica* Grm (= *anglica*).

On May 21, 1921, the Gull-billed Tern was found nesting on open flat ground or slightly raised ridges along the border of a creek north of the Khor Milah, N.W., coast of Bubyah Island. Another colony was nesting amongst the Pelican skeletons and on April 18, 1922, some had hatched. On Warba Island it was breeding with Slender-billed Gulls on the edge of shingle and scrub, and on May 19, 1921 the nests held 2 to 3 mostly 2, fresh eggs; a slight nest of twigs is made. It was known to breed in Warba in 1878. There is also a colony up the Khor Bunder. It must also breed inland as already suspected as Cheesman obtained a bird in breeding condition on the Iskandariyeh Canal on June 23.

Great Crested Grebe. *Podiceps cristatus cristatus*, L. 'Zilif'. (= 'curls') all grebes—'Biraji'.

Two eggs were sent from the Iskandariyeh marshes on July 14 which evidently were of this species; they measured 2.15 by 1.4. It must be resident.

Black-necked Grebe. *Podiceps nigricollis nigricollis*, C.L. Brehm.

With the last, eggs of this species were also sent.

Little Grebe. 1. *Podiceps ruficollis iraquensis* Ticehurst (Bull., B.O.C., xlv, p. 28—Iraq).

When I wrote the *Birds of Mesopotamia* I had seen but few local specimens of this Grebe and I recorded them as *capensis* but examination of further material and the acquisition of breeding birds has convinced me that the breeding Iraq bird is a separable race. They are smaller than *ruficollis* and *capensis* and the red neck is deeper than in the latter. The white on the wing feathers is more extensive than in *ruficollis* but less than in *capensis*, i.e. it extends well on to the primaries but not to the outer four.

6 ♂ <i>capensis</i> Abyssinia and East Africa	...	W. 102-107.5
6 ♀ <i>capensis</i> " " "	...	W. 97-100
series <i>ruficollis</i> Europe	...	W. 95-104
2 ♀ Iraq breeding	...	W. 89-91
9 ♂ ♀ (winter)	...	W. 83-91.5 one 94 mm.

One from Palestine (Waters of Meiron), two 'Asia Minor', one Fayoum Egypt all in breeding dress are apparently *r. ruficollis*; one from Enzeli on the Caspian is *capensis* as are birds from Kashgar and India. *Iraquensis* appears to be a local resident race. I have not been able to re-examine Pitman's two specimens from the War collection but Buxton's from Amara is *iraquensis* so it is doubtful whether *capensis* occurs at all.

2. *Podiceps ruficollis ruficollis* (Pall) (Vroeg's Cat. Adum., p. 6, 1764—Holland). One in the British Museum from the Euphrates expedition I cannot distinguish from the typical race; it is in winter dress and probably a migrant; it has no white on the primaries and a wing of 97 mm.

Spotted Crake. *Porzana porzana* (L).

Cheesman met with at least 20 of these birds at Gurmet Ali on April 19, evidently a recent arrival. The earliest date on passage is March 11 while one was taken on a boat at the head of the Gulf on May 24.

Little Crane. *Porzana parva* (Scops).

Obtained as early as August 20, near Baghdad. Two young ones obtained in autumn and another from Babylon have the chin and throat pure white and are much whiter below, with no buff in the plumage, than any other young birds in the British Museum though one from Italy and one from Sndan approach them in this respect; it is probably an individual variation.

Woodpigeon. *Columba palumbus palumbus*, L. 'Tabaan.'

The Woodpigeon nests at Baghdad in gardens of date palms; the nest is close to the trunk of the palm and on the top fronds and consists of sticks and fibres but is more flimsy than English ones. Two young of different ages were found on August 2; the parent bird apparently starts incubating when the first egg is laid as no doubt other species do in Iraq to keep the egg cool. Eggs were laid in one nest when the shade temperature was 122 F.

Some were seen in October near Chasmet Sherin in the hills east of Ali Gharbi and some must breed at Fao still, at least in some years, as one was obtained there on June 30, 1921. Seeds of water melons are a favourite food. Iraq birds seem small, I have measured none over 240 mm. in wing, smallest 221 mm., however nearly all the birds (nine) at my disposal are either moulting or have very worn wings, including two which measured 240 mm. and therefore I hesitate to separate an Iraq race—Woodpigeons vary much in size and a large series of British ones vary from 239 to 262, not a few being not longer in the wing than 245 mm. Woodpigeons were common at Dohuk in December (M).

Rock Dove. *Columba livia gaddi*, Zar and Loud.

Extends to Dohuk (M). According to Meinertzhagen *palestinae* must stand as a good race as all S. W. Arabian birds have rumps similar in coloration to the mantle, like the type which came unfortunately from the Jordan Valley on the fringe of its range; some Palestine birds as I have already pointed out are not separable from *gaddi*.

Turtle Dove. *Streptopelia turtur arenicolor* (Hart) 'Kumree.'

Thirty nests were found in an area of 10 acres of poplar near Baghdad on June 12. The name 'Tabaan' given (xxviii, p. 380) for this bird belongs properly to the Wood Pigeon.

Indian Ring Dove. *Streptopelia decaocto* (Friv).

Noted at Kirkuk in winter. Meinertzhagen records this dove from Mosul (November and December), Khanikin (December), Ramadi (November), but not at Dohuk (M).

Little Brown Dove. *Streptopelia senegalensis cambayensis* (Gm.)

Cheesman has seen this dove in winter at Beled on one occasion.

Spotted Sandgrouse. *Pterocles senegallus* (L) 'Kndree'.

Sand grouse generally—'Gutta'.

Cheesman found a nest at Aqqar Quf on June 11, the female was almost invisible on the eggs at 20 feet distance except for its eye; on being disturbed it flew off and fluttered on the ground. The two incubated eggs measure 43 by 28 and 41 by 27. Cheesman remarks that the difference in colour between the eggs of this species and those of the Pin-tailed reminds him of the difference between typical Mistle Thrush's and Moorhen's eggs. *Senegallus* is a late breeder in Iraq and is only laying when the Pin-tailed have broods out, yet in Sind I have known it to breed in February. Another clutch of 3 from Aqqar Quf on June 23, measure 40 by 29, 44 by 29 and 38 by 27. A nest with one egg on July 30, and another with 3 slightly incubated eggs on August 14. Chicks are recorded from W of Kazimaim on August 18, and from near Feluja on September 20. The chicks when discovered feign death; they peck food themselves at an early date and have a note like that of their parents. This Sandgrouse was common in the hills E. of Ali Gharbi in October.

Pin-tailed Sandgrouse. *Pterocles alchata caudacutus* (Gm.) 'Iraqi'.

A nest was found under the lee of a dwarf acacia on June 7, the male was incubating and ran off at 20 yards distance. Eggs were still plentiful by July 29,

Pin-tailed Sandgrouse—(contd.)

though they may be found very much earlier. The underparts of adults show a mud stain in the breeding season acquired when watering as I have already noted in the Coronetted Sand grouse (Ibis, 1923, p. 471). Small seeds and clover leaves seem to be the chief food. Cheesman found this Sand grouse common in October in the hills (1,200 ft.) east of Ali Gharbi. The chick has the bare skin round the eye blue grey, iris brown, toes yellowish. Meinertzhagen records that in the dry season there are thousands at Kirkuk which leave with the rains in November. In the Hilla area he estimated 16,000 in the air at once (M).

See-see *Ammoperdix griseogularis* (Brandt) (Bull., Class. Physico. Math. Acad. Imp. St. Petersburg i, p. 365, 1843—Persia).

A re-examination of all the Iraq material with further and better specimens leads me to the conclusion that Zarudny's race *ter-meuleni* is not a good one. See-see vary very much individually, and make of skin and time of year make differences. But if a freshly moulted series is examined one can find specimens from Jebel Hamrin which look quite different, one greyer and one more vinous and sandy and I have seen such specimens obtained in the same area in the same week, moreover similar diverse specimens occur in other areas—Kalat, Sind, etc. Four topo-types of *ter-meuleni* examined and a series from Pusht-i-Kuh and Dohuk examined. Cheesman noted 50 in a flock at a watering in the Jebel Hamrin.

Chukar. *Alectoris graeca*.

1. *Alectoris graeca weræ* (Zar. and Lard.).

Cheesman found this Chukar not uncommon all along the foothills east of Ali Gharbi (S. Luristan) in places such as the Chekkan valley (500–1,000 ft.) and Barz-i-Gez (2,500 ft.). These are topo-typical *weræ* and one from Chasmeh Sherin is the same race. One brought home alive is a much darker bird but in captivity sometimes it was presented by the Wali of Pusht-i-Kuh, exact locality known.

2. *Alectoris graeca kurdestanicus*. Meinertzhagen (Bull., B.O.C., xliii, p. 158, 1923—Dohuk).

This race described as darker than *sinaica* and *weræ*, crown browner than in the latter race, no grey on the nape; nearest *falki* but paler; no vinous wash on breast as in *cypristes* and *falki*, W. 164–173. 160–164. This Chukkar is common at Dohuk and round Zakho (M).

Black Partridge. *Francolinus francolinus francolinus* (L.) (Syst. Nat. Ed. xii, p. 275, 1766—Cyprus).

Meinertzhagen considers Mosul and S. Kurdistan birds to be of the typical race (M). I have seen none from this area. It is rather larger and darker than the next.

***Francolinus francolinus arabistanicus* (Zar. and Harms.).**

Nests are recorded with 4 eggs at Baghdad April 11 and with 12 eggs at Kazimain on April 27. Cheesman noted this species at 500 ft. in the foothills east of Ali Gharbi.

The young in down has the iris brown, the bill horn, brown along the ridge of the culmen. The upper parts are creamy buff, from base of bill down centre of crown a broad chocolate brown line, a short narrow line behind the eyes and a long narrow one over the eyes, three broad parallel lines on dorsum and a broken one over the thighs, all brown cream-white; wings creamy buff mottled with brown.

Quail. *Coturnix coturnix coturnix* (L.) 'Mira'yi'

Noted at Mosul as frequent in winter.

Ostrich. *Struthio camelus* (Bull., B.O.C., xxxiv, p. 83, 1919—Syrian Desert).***Struthio camelus syriacus* Rothsch.**

For the distribution of the Arabian Ostrich see Ibis, 1922, p. 471, *Journal, Bombay Nat. Hist. Soc.*, 1921, Ibis, 1923, p. 208, which brings our knowledge up

Ostrich—(contd.)

to date. Though probably not found within our limits to-day it occurs in the Syrian desert west of the Euphrates between parallels 30 and 34 at the heads of the Wadis running to and 100 miles or so distant from that river. In 1789 it was found but 12 miles west of Hit.

Three eggs brought back measure 148×117 , 155×121 , 155×116 they are pale creamy white, smooth polished with faint pittings. One egg weighed 929 grammes unblown and addled.

Two birds measure according to Cheesman :—

Tarsus ...	...	...	19.5 in.	18.75 in.
Tail ...	...	...	15.5 in.	16 in.
Culmen from gape	...	...	4.75 in.	5 in.
Back from ground...	...	...	4 ft. $1\frac{1}{4}$ in.	3 ft. 11 in.